

## Patent Abstracts of Japan

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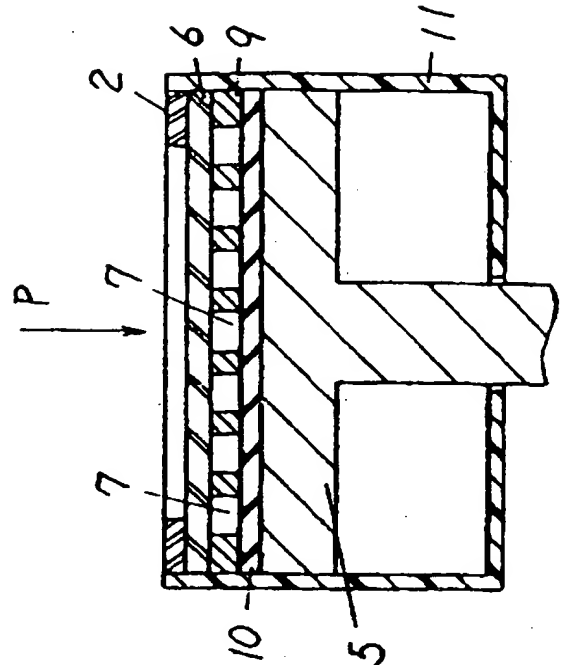
APPLICATION DATE : 17-03-83  
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TITLE : CONDENSER MICROPHONE



ABSTRACT : PURPOSE: To prevent a resonance frequency from being lowered at a high ambient temperature by inserting a metallic thin film spacer having lots of through- holes and an insulator between a metallic diaphragm and a back electrode.

CONSTITUTION: The condenser microphone consists of a diaphragm 6 made of metallic foil, a spacer 9 comprising metallic thin film having plural through- holes 7, the metallic back electrode 5 and an insulating film 10. In this constitution, a DC bias voltage is impressed between the diaphragm 6 and the back electrode 5 and a sound pressure P is applied to the diaphragm 6, then the length of the through-holes 7 is changed and a capacitance between the diaphragm 6 and the back electrode 5 is changed and this is extracted as a voltage change. Since a metallic foil having a less expansion coefficient than a plastic film by nearly 1 digit is used in this way, no deflection is produced in a high ambient temperature and the resonance frequency is not decreased. Since the spacer 9 is also the metallic thin film, the holes 7 are formed with high precision and the control of the resonance frequency is easy.

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